

On the other hand, rear-end collisions on congested urban freeways represents a significantly more difficult problem to solve. The idea of using instrumented vehicles as probes, and using wireless communications to broadcast probe information to a traffic control center has been described for many years. What is missing, however, is a plan or strategy of how to use the vehicle-based, and/or infrastructure-based sensors and communications systems to reduce rear end crashes. Clearly safety applications will require both since it will be many years before in-vehicle technology is 100% deployed. Initial efforts in this direction (using infrastructure-based sensing) are already being pursued at the University of Minnesota.

There are of course many applications of the vehicle probe model to both urban and rural traffic management and incident management. Using vehicles as probes will certainly have an impact on road safety. The question of its significance and impact on safety can only be addressed by further analysis of the crash data and various collision mitigation scenarios based on the form that the probe model takes (which at present is beyond the scope of this document).

## Conclusion

DSRC is not VII, and VII is not DSRC. DSRC represents one possible mode of wireless communication upon which a comprehensive VII system will be built. Commitments to DSRC should not be made until hardware can be analyzed fully. This is not to close the door on DSRC; on the contrary, it may enable a number of safety applications.

With that, we conclude with the following points:

1. DSRC will not directly help the Minnesota/US Fatality lane departure problem. Its range is too short, and too many Road Side Units (RSU's) are required to support reliable, comprehensive communication. However it may have a role in providing wireless map updates at work zones and other locations so that in-vehicle lane departure warnings will have updated high accuracy lane level maps to work from.
2. At rural un-signalized intersections, DSRC may have two benefits. First, it could be used to transmit warning information directly to the vehicle on the minor road, enabling an in-vehicle driver interface to provide the necessary cues to the driver. Second, driver-vehicle information (i.e., driver age, acceleration habits, records of previous trajectories at a particular intersection, vehicle type, etc.) stored on board the vehicle could be passed to the intersection controller as a means to tailor the warning to the driver's habits and likely behavior. Custom warnings offer higher performance and increase the chance of driver acceptance of the system.
3. DSRC may help the intersection crash problem (with in-vehicle warnings). In both rural and urban areas where intersection crashes and fatalities are problematic, DSRC may enable the deployment of "smart" intersections, where a central computational platform can determine the probability of red light/stop sign running or of an imminent rear ender at a rural signalized intersection, and issue a warning to the vehicle.
4. DSRC may help the urban congestion problem by enabling a reliable, efficient traffic management plan. Its short range and high bandwidth make it ideal for areas with high vehicle density. DSRC may be most applicable to electronic road user charging. As Minnesota moves towards the deployment of HOT lanes for better capacity management, wireless communication mechanisms should be explored further. However, commitments to DSRC should not be made until additional analyses are completed for specific relevant applications, and a plan to use the data provided via DSRC is developed.

In summary, before commitments are made, a comprehensive evaluation of VII within the context of its specific applications needs to be conducted so that its properties and performance can be modeled and further analyzed. Designing a universal VII architecture before a role for VII is identified within specific applications is premature.



January 26, 2005


Steve Pott  
Regional Chairperson Region 22 ( Minnesota)  
Washington County Sheriff's Office  
15015 62nd Street North  
Stillwater, MN 55082-3801

Dear Mr. Pott,

Region 15 (Iowa) is in receipt of your proposed 700 MHz Regional Plan, dated December 30, 2004. Region 15 met on January 26, 2005, reviewed and formally approved Region 22's Plan.

This letter serves as the official, written concurrence of Region 15 to your proposed 700 MHz Regional Plan.

Sincerely,

  
Richard H. Hester, Chairperson  
Region 15 700 MHz RPC  
Iowa State Patrol Communications  
56911 Whitepole Road  
Lewis, Iowa 51544

# Inter-Regional Coordination Procedures and Procedures for Resolution of Disputes That May Arise Under FCC Approved Plans

## I. INTRODUCTION

This is a mutually agreed upon Inter-Regional Coordination Procedures Agreement (Agreement) by and between the Region 15 and Region 22 700 MHz Regional Planning Committees.

## II. INTER-REGIONAL COORDINATION AGREEMENT

The following is the specific procedure for inter-regional coordination which has been agreed upon by Regions 15 and 22, and which will be used by the Regions to coordinate with adjacent Regional Planning Committees, when a license application is made which is inconsistent with the approved Regional Plan.

- a. Intra-regional review and coordination takes place, including a technical review resulting in assignment of channels.
- b. After intra-regional review, a copy of those frequency-specific applications requiring adjacent Region approval, including a definition statement of proposed service area, shall then be forwarded to the adjacent Region(s) for review.<sup>1</sup> This information will be sent to the adjacent Regional chairperson(s) using the CAPRAD database.
- c. The adjacent Region reviews the application. If the application is approved, a letter of concurrence shall be sent, via the CAPRAD database, to the initiating Regional chairperson within thirty (30) calendar days.
- d. If the adjacent Region(s) cannot approve the request, the adjacent Region shall document the reasons for partial or non-concurrence, and respond within 10 (Ten) calendar days via email. If the applying Region cannot modify the application to satisfy the objections of the adjacent

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<sup>1</sup> If an applicant's proposed service area or interference contour extends into an adjacent Public Safety Region(s), the application must be approved by the affected Region(s). Service area shall normally be defined as the area included within the geographical boundary of the applicant, plus three (3) miles. Interference contour shall normally be defined as a 5 dBu co-channel contour or a 60 dBu adjacent channel contour. Other definitions of service area or interference shall be justified with an accompanying *Memorandum of Understanding (MOU)* or other application documentation between agencies, i.e. mutual aid agreements.

Region then, a working group comprised of representatives of the two Regions shall be convened within thirty (30) calendar days to attempt to resolve the dispute. The working group shall then report its findings within thirty (30) calendar days to the Regional chairpersons email (CAPRAD database). Findings may include, but not be limited to:

- (i) Unconditional concurrence;
- (ii) conditional concurrence contingent upon modification of applicant's technical parameters; or
- (iii) partial or total denial of proposed frequencies due to inability to meet co-channel/adjacent channel interference free protection to existing licensees within the adjacent Region.

e. If the Inter-Regional Working Group cannot resolve the dispute, then the matter shall be forwarded for evaluation to the National Plan Oversight Committee (NPOC)<sup>2</sup>, of the National Public Safety Telecommunications Council. Each Region involved in the dispute shall include a detailed explanation of its position, including engineering studies and any other technical information deemed relevant. The NPOC will, within thirty (30) calendar days, report its recommendation(s) to the Regional chairpersons via the CAPRAD database. The NPOC's decision may support either of the disputing Regions or it may develop a proposal that it deems mutually advantageous to each disputing Region.

f. Where adjacent Region concurrence has been secured, and the channel assignments would result in no change to the Region's currently Commission approved channel assignment matrix. The initiating Region may then advise the applicant(s) that their application may be forwarded to a frequency coordinator for processing and filing with the Commission.

g. Where adjacent Region concurrence has been secured, and the channel assignments would result in a change to the Region's currently Commission approved channel assignment matrix, then the initiating Region shall file with the Commission a *Petition to Amend* their current Regional plan's frequency matrix, reflecting the new channel assignments, with a copy of the *Petition* sent to the adjacent Regional chairperson(s).

h. Upon Commission issuance of an *Order* adopting the amended channel assignment matrix, the initiating Regional chairperson will send a courtesy copy of the *Order* to the adjacent Regional chairperson(s) and may then advise the applicant(s) that they may forward their applications

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<sup>2</sup> The Regional Plan Oversight Committee (RPOC) is a committee within the National Public Safety Telecommunications Council (NPSTC) established to arbitrate disputes between 700 MHz Regions that cannot be resolved by the impacted Regions.

to the frequency coordinator for processing and filing with the Commission.

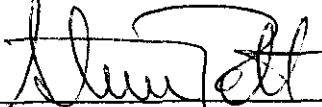
### III. CONCLUSION

IN AGREEMENT HERETO, Regions 15 and 22 do hereunto set their signatures.

Respectfully,

  
\_\_\_\_\_  
Richard Hester  
Region 15 Chairperson

1-26-05  
Date

  
\_\_\_\_\_  
Steve Pott  
Region 22 Chairperson

1/21/05  
Date





August 26, 2005

Mr. Steven F. Pott  
Regional Chairperson Region 22  
Washington County Sheriff's Office  
15015 62<sup>nd</sup> Street North  
P.O. Box 3801  
Stillwater, MN 55082-3801

RE: 700 MHz Regional Plan Letter of Concurrence

Dear Mr. Pott:

Region 45 is in receipt of your proposed 700 MHz Regional Plan submitted to this Committee on April 15, 2005. Region 45 has reviewed and formally approved Region 22's Plan.

This letter serves as the official written concurrence of Region 45 to your proposed 700 MHz Regional Plan.

Sincerely,

DAVID E. KIRK  
CHIEF OF POLICE

RUSSELL R. SCHREINER  
COMMUNICATION/ELECTRONICS  
TECHNICIAN  
CHAIRPERSON REGION 45

RECEIVED

AUG 29 2005

Washington County Sheriff  
Stillwater, MN

RRS:pmk

DEPARTMENT  
OF POLICE  
  
CITY HALL  
828 CENTER AVE.  
SHEBOYGAN, WI  
53081-4499  
  
920/459-3333  
FAX 920/459-0205

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# Inter-Regional Coordination Procedures and Procedures for Resolution of Disputes That May Arise Under FCC Approved Plans

## I. INTRODUCTION

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## II. INTER-REGIONAL COORDINATION AGREEMENT

The following is the specific procedure for inter-regional coordination which has been agreed upon by Regions 45 and 22, and which will be used by the Regions to coordinate with adjacent Regional Planning Committees, when a license application is made which is inconsistent with the approved Regional Plan.

- a. Intra-regional review and coordination takes place, including a technical review resulting in assignment of channels.
- b. After intra-regional review, a copy of those frequency-specific applications requiring adjacent Region approval, including a definition statement of proposed service area, shall then be forwarded to the adjacent Region(s) for review.<sup>1</sup> This information will be sent to the adjacent Regional chairperson(s) using the CAPRAD database.
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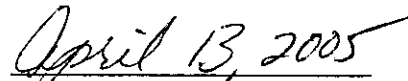
to the frequency coordinator for processing and filing with the Commission.

**III. CONCLUSION**

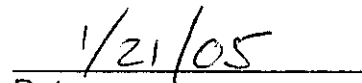
IN AGREEMENT HERETO, Regions 45 and 22 do hereunto set their signatures.

Respectfully,

  
Karen A. Carlson  
Region 45 Chairperson

  
Date

  
Steve Pott  
Region 22 Chairperson

  
Date